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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/702,361	11/06/2003	Melissa Lee Merlau	A01462	8529

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EXAMINER	
VANIK, DAVID L	

ART UNIT	PAPER NUMBER
1615	

DATE MAILED: 04/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/702,361	MERLAU ET AL.	
	Examiner	Art Unit	
	David L. Vanik	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) *8 and 9* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/21/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Receipt is acknowledged of the Applicants' Remarks, Amended Claims, and Request for Continued Examination filed on 2/21/2006.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-7 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 103513/92 ('392).

'392 disclose water-based cosmetic compositions comprising two or more acrylic emulsions wherein said emulsions have a difference in glass transition temperature (Tg) of at least 10° C or more (Claim 1). As set forth in the working example, like the instant application, the composition advanced by '392 comprise (1) a polymer emulsion A (Tg at 50° C) comprising 71.7 parts methyl methacrylate, 20.1 parts n-butyl acetate, and 8.2 parts N-N-dimethylaminoethyl methacrylate and (2) a second polymer emulsion B (Tg at 10° C) comprising 49 parts methyl methacrylate, 42.8 parts n-butyl acetate, and 8.2 parts N-N-dimethylaminoethyl methacrylate. The Tg separation between the two

polymer emulsions is greater than 20° C (See working example). It should be noted that the use of the composition as a hair styling composition is considered to be a future intended use of the composition and, as such, is given no patentable weight. Additionally, it should be noted that the preparation of the polymer-based composition using a multistage polymerization process is considered to be a process limitation. Giving the instant claim set its broadest reasonable interpretation, product-by-process claims are treated as product claims. As such, the process limitation is afforded no patentable weight.

It is the examiner's position that, inherently, when fashioned into a film, the composition advanced by '392 has a tensile storage modulus at 20° C of from about $1x10^{10}$ Pascal to $1x10^{8}$ Pascal and a storage modulus at 70° C of from about $1x10^{9}$ Pascal to $1x10^{6}$ Pascal. Since the essential elements of the '392 composition are identical to the instant compositions (that is, a composition comprising two polymers with different Tg values and a cosmetically acceptable solvent wherein the first polymer has a Tg between about 30 to about 250° C and the second polymer has a Tg between about minus 20 to about 35° C), the composition would inherently have the same physiochemical properties as the compositions set forth in the instant application. As such, it is the examiner's position that the composition advanced by '955 anticipates the compositions enumerated in the instant claim set.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-7 are rejected under 35 U.S.C. 102(b) as being anticipated by English-translated WO 99/63955 ('955).

'955 disclose compositions comprising at least one "tacky" polymer and at least one "setting" polymer (Title and page 4, paragraph 1). According to '955, the tacky polymer has a Tg of less than 20° C whereas the setting polymer has a Tg of greater than 15° C (page 5, paragraph 4). The distinct first and second polymers can be chosen from a wide-range of polymers, including sulfonic polyesters and polyurethanes (See generally pages 6-13 and specifically page 6, paragraphs 6-7 and page 9, paragraph 7). According to '955, the "tacky" polymer can be a methacrylic ester polymer, while the "setting" polymer can be those containing acrylic, methacrylic, or styrene monomers (page 7, line 35 – page 8, line 30 and page 10, lines 27-33). Specific first and second polymer mixtures can comprise AQ1350, having a Tg equal to 0° C, and Uramul SC 132, having a Tg equal to 50° C (page 7, paragraph 9; page 10, paragraph 10; and Example 2). When AQ1350 and Uramul SC 132 are used together in a composition (Example 2), the difference in Tg between the first and second polymers is equal to 50° C. It should be noted that water and alcohol can be considered cosmetically acceptable solvents (See Compositions 1-8).

Additionally, it should be noted that the preparation of the polymer-based composition using a multistage polymerization process is considered to be a process limitation. Giving the instant claim set its broadest reasonable interpretation, product-by-process claims are treated as product claims. As such, the process limitation is afforded no patentable weight.

It is the examiner's position that, inherently, when fashioned into a film, the composition advanced by '955 has a tensile storage modulus at 20° C of from about $1x10^{10}$ Pascal to $1x10^{8}$ Pascal and a storage modulus at 70° C of from about $1x10^{9}$ Pascal to $1x10^{6}$ Pascal. Since the essential elements of the '955 composition are identical to the instant compositions (that is, a composition comprising two polymers with different Tg values and a cosmetically acceptable solvent wherein the first polymer has a Tg between about 30 to about 250° C and the second polymer has a Tg between about minus 20 to about 35° C), the composition would inherently have the same physiochemical properties as the compositions set forth in the instant application. As such, it is the examiner's position that the composition advanced by '955 anticipates the compositions enumerated in the instant claim set.

The claims are therefore anticipated by English-translated WO 99/63955 ('955).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 6,136,884 ('884).

'884 disclose a latex composition for hair care (abstract). Said composition comprises a hybrid graft copolymer further comprising at least two distinct polymers (column 2, lines 38-43 and Claims 1-19). Specifically, the two distinct polymers used in the invention advanced by '884 can be a (1) sulfopolyester copolymer and a (2) acid-functional polymer (Claims 1 and 17). Like the instant application, the polymer system advanced by '884 comprises homopolymer and copolymers derived from polyesters (column 4, lines 7-8), ethylenically unsaturated monomers (column 4, lines 44-65), and acid functionalized monomers, such as methacrylic acid (column 4, lines 16-43). The glass transition temperature (Tg) of the two polymers can also be different: (1) the Tg of the sulfopolyester group can be between about 15 to about 60° C, and (2) the Tg of the acid-functional polymer can be between about 40 to about 80° C (Claims 8 and 19, column 3, lines 43-44, and column 7, lines 12-20). Thus, like the instant application, the difference in Tg between the first polymer, an acid-functional polymer, and the second polymer, a sulfopolyester copolymer, can be 20° C or more.

Giving the instant claim set the broadest reasonable interpretation, it is the examiner's position that the phrases a "first polymer or polymer mixture" and "a second polymer or polymer mixture" encompass graft copolymers comprising distinct polymer segments. The "first" segment of the graft copolymer is fused with the "second"

segment, resulting in a graft copolymer comprising a "mixture" of two distinct polymer segments. As set forth in '884, the glass transition temperature (Tg) of the two polymers can also be different: (1) the Tg of the sulfopolyester group can be between about 15 to about 60° C, and (2) the Tg of the acid-functional polymer can be between about 40 to about 80° C (Claims 8 and 19, column 3, lines 43-44, and column 7, lines 12-20). Thus, like the instant application, the difference in Tg between the first polymer, an acid-functional polymer, and the second polymer, a sulfopolyester copolymer, can be 20° C or more.

Additionally, it should be noted that the preparation of the polymer-based composition using a multistage polymerization process is considered to be a process limitation. Giving the instant claim set its broadest reasonable interpretation, product-by-process claims are treated as product claims. As such, the process limitation is afforded no patentable weight.

The polymer system advanced by '884 can be dissolved together in a cosmetically acceptable solvent (column 8, lines 33-64). The hair care formulation can also be fashioned into a film (column 8, lines 14-32). It is the examiner's position that, inherently, when fashioned into a film, the composition advanced by '884 has a tensile storage modulus at 20° C of from about $1x10^{10}$ Pascal to $1x10^{8}$ Pascal and a storage modulus at 70° C of from about $1x10^{9}$ Pascal to $1x10^{6}$ Pascal. Since the essential elements of the '884 composition are identical to the instant compositions (that is, a composition comprising two polymers with different Tg values and a cosmetically acceptable solvent wherein the first polymer has a Tg between about 30 to about 250°

C and the second polymer has a Tg between about 20 to about 35° C), the composition would inherently have the same physiochemical properties as the compositions set forth in the instant application. As such, it is the examiner's position that the composition advanced by '884 anticipates the compositions enumerated in the instant claim set.

In conclusion, by disclosing a hybrid-graft polymer comprising a mixture of two distinct polymer segments wherein the difference in Tg between the first and second segments can be 20° C or more, it is the examiner's position that the instant claims are anticipated by US Patent 6,136,884 ('884).

Response to Arguments

Applicant's arguments filed 2/21/2006 have been fully considered but they are not persuasive.

(1) With respect to the JP 103513/92 ('392) reference, Applicant asserts that the compositions set forth in the '392 reference are significantly different than those disclosed by Applicant. Moreover, Applicant asserts that the '392 compositions have markedly different properties than the compositions advanced by Applicant. The examiner respectfully disagrees with these assertions. As set forth in the instant claim set, the compositions comprise a (1) a first polymer or polymer mixture with a Tg from 30° C to 250° C, (2) a second polymer or polymer mixture with a Tg from -20° C to 35° C, and (c) one or more cosmetically acceptable solvents. Additionally, the composition advanced in the instant claim set, when fashioned into a film, has a tensile storage

modulus at 20° C of from about $1x10^{10}$ Pascal to $1x10^{8}$ Pascal and a storage modulus at 70° C of from about $1x10^{9}$ Pascal to $1x10^{6}$ Pascal. The composition as claimed is also prepared via a multistage polymerization process and the first and second polymers are independently selected from block, graft, and copolymers derived from ethylenically unsaturated monomers.

It is the examiner's position that '392 meet the above limitations. For one, as discussed above, the compositions advanced by '392 comprise (1) a polymer emulsion A (Tg at 50° C) comprising 71.7 parts methyl methacrylate, 20.1 parts n-butyl acetate, and 8.2 parts N-N-dimethylaminoethyl methacrylate and (2) a second polymer emulsion B (Tg at 10° C) comprising 49 parts methyl methacrylate, 42.8 parts n-butyl acetate, and 8.2 parts N-N-dimethylaminoethyl methacrylate. In terms of the multistage polymerization process, it is the examiner's position that this is granted no patentable weight as it can be considered a process limitation. Given the claims the broadest reasonable interpretation, product-by-process claims are treated as product claims. In terms of the tensile strength and storage properties, it is the examiner's that the composition advanced by '392, inherently, also meets this limitation. As stated in the specification, the instant composition may be prepared via emulsion, solution, bulk, and suspension polymerization methods (page 6, lines 31-33). Since there is nothing that indicates that the above tensile strength and storage properties are only attributable to polymers made via a multistage polymerization process, it is the examiner's position that the compositions advanced by '392, inherently, meet these limitations.

(2) With respect to the previously cited '955 patent, Applicants' argue (by citing related patent JP20022517427A) that a multistage polymerization process would not provide a polymer blend with the same properties as those disclosed by '955. Again, it should be noted that the preparation of the polymer-based composition using a multistage polymerization process is considered to be a process limitation. Giving the instant claim set its broadest reasonable interpretation, product-by-process claims are treated as product claims. As such, the process limitation is afforded no patentable weight. In terms of the tensile strength and storage properties, it is the examiner's that the composition advanced by '955, inherently, also meets this limitation. As stated in the specification, the instant composition may be prepared via emulsion, solution, bulk, and suspension polymerization methods (page 6, lines 31-33). Since there is nothing that indicates that the above tensile strength and storage properties are only attributable to polymers made via a multistage polymerization process, it is the examiner's position that the compositions advanced by '955, inherently, meet these limitations.

(3) With respect to the previously cited '884 patent, Applicants' argue that the multistage polymerization process would not provide a polymer blend with the same properties as those disclosed by '884. The examiner respectfully disagrees with these assertions. As written, claims 1 and 7 state that the first and second polymers can be block copolymers and homopolymers derived from ethylenically unsaturated monomers. It is the examiner's position, giving the claims their broadest reasonable interpretation, that this limitation is met by '884 (See above rejection). Once again, it should be noted that the preparation of the polymer-based composition using a multistage

polymerization process is considered to be a process limitation. Giving the instant claim set its broadest reasonable interpretation, product-by-process claims are treated as product claims. As such, the process limitation is afforded no patentable weight. In terms of the tensile strength and storage properties, it is the examiner's that the composition advanced by '884, inherently, also meets this limitation. As stated in the specification, the instant composition may be prepared via emulsion, solution, bulk, and suspension polymerization methods (page 6, lines 31-33). Since there is nothing that indicates that the above tensile strength and storage properties are only attributable to polymers made via a multistage polymerization process, it is the examiner's position that the compositions advanced by '884, inherently, meet these limitations.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Vanik whose telephone number is (571) 272-3104. The examiner can normally be reached on Monday-Friday 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page can be reached on (571) 272-0602. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Vanik, Ph.D.
Art Unit 1615

4/18/06

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